SAFETY DATA SHEET

Section 1. Identification

Product identifier : ADDITIN RC 4203

Material Number : 05082927

Identified uses : Additive for lubricants

Supplier/Manufacturer : LANXESS Corporation
Rhein Chemie Additives
111 RIDC Park West Drive
Pittsburgh, PA 15275-1112
USA

For information: US/Canada (800) LANXESS
International +1 412 809 1000

In case of emergency : Chemtrec (800) 424-9300
International (703) 527-3887
Lanxess Emergency Phone (800) 410-3063.

Section 2. Hazards identification

HAZCOM Standard Status : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Physical state : Liquid.

Color : Dark brown

Classification of the substance or mixture : SKIN SENSITIZATION. - Category 1

Percentage of the mixture consisting of ingredient(s) of unknown toxicity: 52.8%

Hazard pictograms :

Signal word : Warning

Hazard statements : May cause an allergic skin reaction.

Hazard Not Otherwise Classified (HNOC) : None known.

Precautionary statements

Prevention : Wear protective gloves. Avoid breathing vapor. Contaminated work clothing should not be allowed out of the workplace.

Response : IF ON SKIN: Wash with plenty of soap and water. Wash contaminated clothing before reuse. If skin irritation or rash occurs: Get medical attention.

Storage : Not applicable.

Disposal : Dispose of contents and container in accordance with all local, regional, national and international regulations.

Supplemental label elements : Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials and food and drink.

Section 3. Composition/information on ingredients

Substance/mixture : Mixture

Ingredient name	%	CAS number
Benzenesulfonic acid, di-C10-14-alkyl derivs., calcium salts	25 - 50	93820-57-6
Benzene, mono-C10-14-alkyl derivs., fractionation bottoms, intermediate cut, sulfonated, sodium salts	<5	70892-46-5
Lubricating oils (petroleum), C15-30, hydrotreated neutral oil-based	<5	72623-86-0
Alkyl Amine	<1	68955-53-3

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First aid measures

Description of first aid measures

Eye contact : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.

Inhalation : Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if adverse health effects persist or are severe. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. If not breathing, if breathing is irregulor or respiratory arrest occurs, provide artifical respiration, or oxygen by a trained professional, using a pocket type respirator.

Skin contact : Wash with plenty of soap and water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Get medical attention. In the event of any complaints or symptoms, avoid further exposure. Wash clothing before reuse. Clean shoes thoroughly before reuse.

Ingestion : Wash out mouth with water. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention if adverse health effects persist or are severe. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Potential acute health effects

Eye contact : No known significant effects or critical hazards.

Inhalation : No known significant effects or critical hazards.

Skin contact : May cause an allergic skin reaction.

Ingestion : No known significant effects or critical hazards.

Over-exposure signs/symptoms

Eye contact : No specific data.

Inhalation : No specific data.

Skin contact : Once sensitized, an allergic skin reaction may occur with reddening, swelling, and rash when subsequently exposed to very low levels.

Ingestion : No specific data.

Potential chronic health effects

Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.

Section 4. First aid measures

Notes to physician : Treat symptomatically. No specific treatment.

Protection of first-aiders : No special measures required.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media : Use an extinguishing agent suitable for the surrounding fire. In case of fire, use water spray (fog), foam or dry chemical.

Unsuitable extinguishing media : None known.

Specific hazards arising from the chemical : In a fire or if heated, a pressure increase will occur and the container may burst.

Hazardous thermal decomposition products : Decomposition products may include the following materials:
carbon oxides (CO, CO_2)

Special protective actions for fire-fighters : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

Environmental precautions : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Methods and materials for containment and cleaning up : Stop leak if without risk. Move containers from spill area. Approach release from upwind. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal. Prevent entry into sewers, water courses, basements or confined areas.

Section 7. Handling and storage

Precautions for safe handling

Protective measures : Do not get in eyes or on skin or clothing. Do not ingest. Avoid breathing vapor or mist. Use only with adequate ventilation. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container. Remove contaminated clothing and protective equipment before entering eating areas. Workers should wash hands and face before eating, drinking and smoking. Put on appropriate personal protection equipment. Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Persons with a history of skin sensitization to this product should not be employed in any process in which this product is used.

Section 7. Handling and storage

Conditions for safe storage : Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. Empty containers retain product residue and can be hazardous. Do not reuse container.

Section 8. Exposure controls/personal protection

Occupational exposure limits

Ingredient name	Exposure limits
Lubricating oils (petroleum), C15-30, hydrotreated neutral oil-based	**ACGIH TLV (United States, 3/2015).** TWA: 5 mg/m³ 8 hours. Form: Inhalable fraction **OSHA PEL (United States, 2/2013).** TWA: 5 mg/m³ 8 hours.

If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment.

Appropriate engineering controls : Good general ventilation should be sufficient to control worker exposure to airborne contaminants.

Personal protection

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Respiratory protection : Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator. A NIOSH approved air purifying respirator with organic vapor cartridges and particulate prefilter can be used to minimize exposure.

Skin protection : Chemical-resistant gloves.

Eye/face protection : Chemical splash goggles or face shield.

Medical Surveillance : Not available.

Section 9. Physical and chemical properties

Physical state : Liquid.

Color : Dark brown

Odor : Slight

Odor threshold : Not available.

pH : Not available.

Boiling point : Not available.

Melting point : Not available.

Flash point : Closed cup: 180°C (356°F) [DIN ISO 2592]

Evaporation rate : Not available.

Explosion limits : Not available.

Vapor pressure : Not available.

Density : 0.94 g/cm³

Section 9. Physical and chemical properties

Specific gravity (Relative density) : Not available.

Solubility : Very slightly soluble in the following materials: cold water

Partition coefficient: n-octanol/water : Not available.

Vapor density : Not available.

Viscosity : Kinematic: 9 cm^2/s

Auto-ignition temperature : Not available.

Decomposition temperature : Not available.

Section 10. Stability and reactivity

Reactivity : No specific test data related to reactivity available for this product or its ingredients.

Chemical stability : The product is stable.

Possibility of hazardous reactions : Under normal conditions of storage and use, hazardous reactions will not occur.

Conditions to avoid : Extremes of temperature and direct sunlight.

Incompatible materials : Reducing agents, oxidizing agents, acids and bases

Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

Information on the likely routes of exposure : Dermal contact. Eye contact. Inhalation. Ingestion.

Potential acute health effects

Eye contact : No known significant effects or critical hazards.

Inhalation : No known significant effects or critical hazards.

Skin contact : May cause an allergic skin reaction.

Ingestion : No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact : No specific data.

Inhalation : No specific data.

Skin contact : Once sensitized, an allergic skin reaction may occur with reddening, swelling, and rash when subsequently exposed to very low levels.

Ingestion : No specific data.

Potential chronic health effects

Short term exposure

Potential immediate effects : Not available.

Long term exposure

Potential delayed effects : Not available.

General : Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.

Carcinogenicity : No known significant effects or critical hazards.

Mutagenicity : No known significant effects or critical hazards.

Teratogenicity : No known significant effects or critical hazards.

Developmental effects : No known significant effects or critical hazards.

Fertility effects : No known significant effects or critical hazards.

Information on toxicological effects

Acute toxicity

Section 11. Toxicological information

Product/ingredient name	Result	Species	Dose	Exposure	Test
Lubricating oils (petroleum), C15-30, hydrotreated neutral oil-based	LD50 Oral	Rat	>5000 mg/kg	-	OECD 401 Acute Oral Toxicity
Alkyl Amine	LD50 Oral	Rat - Male	1177 mg/kg	-	-
	LD50 Oral	Rat - Female	612 mg/kg	-	-
Lubricating oils (petroleum), C15-30, hydrotreated neutral oil-based	LD50 Dermal	Rabbit	>2000 mg/kg	-	402 Acute Dermal Toxicity
Alkyl Amine	LD50 Dermal	Rat	251 mg/kg	-	-
Lubricating oils (petroleum), C15-30, hydrotreated neutral oil-based	LC50 Inhalation Dusts and mists	Rat	>5.53 mg/l	4 hours	OECD 403 Acute Inhalation Toxicity
Alkyl Amine	LC50 Inhalation Vapor	Rat - Male	>1.75 mg/l	4 hours	-
	LC50 Inhalation Vapor	Rat - Female	1.19 mg/l	4 hours	-

Irritation/Corrosion

Conclusion/Summary

Skin : Alkyl Amine:Corrosive. tested on rabbits

Eyes : Alkyl Amine:Severe irritant tested on rabbit eyes

Sensitization

Product/ingredient name	Route of exposure	Species	Result
Alkyl Amine	skin	Guinea pig	Sensitizing

Skin : Benzenesulfonic acid, di-C10-14-alkyl derivs., calcium salts :Sensitizing
Benzene, mono-C10-14-alkyl derivs., fractionation bottoms, intermediate cut, sulfonated, sodium salts:Sensitizing

Mutagenicity

Product/ingredient name	Test	Experiment	Result
Alkyl Amine	487 *In vitro* Micronucleus Test	Experiment: In vivo Subject: Mammalian-Animal	Negative

Carcinogenicity

Product/ingredient name	Result	Species	Dose	Exposure
Lubricating oils (petroleum), C15-30, hydrotreated neutral oil-based	Negative - Unreported -	Human	-	-

Product/ingredient name	CAS #	IARC	NTP	OSHA
Benzenesulfonic acid, di-C10-14-alkyl derivs., calcium salts	93820-57-6	Not classified.	Not classified.	Not classified.
Benzene, mono-C10-14-alkyl derivs., fractionation bottoms, intermediate cut, sulfonated, sodium salts	70892-46-5	Not classified.	Not classified.	Not classified.
Lubricating oils (petroleum), C15-30, hydrotreated neutral oil-based	72623-86-0	Not classified.	Not classified.	Not classified.
Alkyl Amine	68955-53-3	Not classified.	Not classified.	Not classified.

Section 11. Toxicological information

Specific target organ toxicity (single exposure)

Name	Category	Route of exposure	Target organs
Lubricating oils (petroleum), C15-30, hydrotreated neutral oil-based	Category 3	Not applicable.	Respiratory tract irritation

Acute toxicity estimates

Route	ATE value (Acute Toxicity Estimates)
Not available.	

Section 12. Ecological information

Toxicity

Product/ingredient name	Test	Result	Species	Exposure
Lubricating oils (petroleum), C15-30, hydrotreated neutral oil-based	OECD 202 *Daphnia* sp. Acute Immobilization Test	Acute EC50 >10000 mg/l	Crustaceans - Daphnia magna	48 hours
	OECD 203 Fish, Acute Toxicity Test	Acute LC50 >100 mg/l	Fish - Pimephales promelas	96 hours
	OECD 201 Alga, Growth Inhibition Test	Acute NOEC >100 mg/l	Algae - Pseudokirchneriella subcapitata	72 hours
	OECD 211 *Daphnia Magna* Reproduction Test	Chronic NOEC 10 mg/l	Crustaceans - Daphnia magna	21 days
Alkyl Amine	201 Alga, Growth Inhibition Test	Acute EC50 0.435 mg/l	Algae - Selenastrum capricornutum	72 hours
	-	Acute EC50 2.5 mg/l	Daphnia	48 hours
	203 Fish, Acute Toxicity Test	Acute EC50 1.3 mg/l	Fish - Oncorhynchus mykiss	96 hours

Conclusion/Summary : Not available.

Persistence and degradability

Product/ingredient name	Test	Result	Dose	Inoculum
Alkyl Amine	301D Ready Biodegradability - Closed Bottle Test	21.8 % - Not readily - 28 days	-	-

Conclusion/Summary : Not available.

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
Lubricating oils (petroleum), C15-30, hydrotreated neutral oil-based	-	-	Not readily
Alkyl Amine	-	-	Not readily

Bioaccumulative potential

Product/ingredient name	$LogP_{ow}$	BCF	Potential
Alkyl Amine	2.9	-	low

Mobility in soil

Soil/water partition coefficient (K_{OC}) : Not available.

Section 12. Ecological information

Other adverse effects : No known significant effects or critical hazards.

Section 13. Disposal considerations

Disposal methods : The generation of waste should be avoided or minimized wherever possible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Waste disposal should be in accordance with existing federal state, provincial and or local environmental controls laws.

RCRA classification : : If discarded in its purchased form, this product would not be a hazardous waste either by listing or by characteristic. However, under RCRA, it is the responsibility of the product user to determine at the time of disposal, whether a material containing the product or derived from the product should be classified as a hazardous waste. (40 CFR 261.20-24)

Section 14. Transport information

Regulatory information	UN number	Proper shipping name	Classes	PG*	Label	Additional information
DOT Classification	-	-	-	-		Not regulated.
IMDG Class	-	-	-	-		Not regulated.
IATA-DGR Class	-	-	-	-		Not regulated.

PG* : Packing group

RQ : 0 lbs

Section 15. Regulatory information

SARA 311/312 : Immediate (acute) health hazard

SARA Title III Section 302 Extremely Hazardous Substances : None

SARA Title III Section 313 Toxic Chemicals : None

US EPA CERCLA Hazardous Subtances (40 CFR 302.4) : None

State regulations

The following chemicals are specifically listed by individual states; other product specific health and safety data in other sections on the SDS may also be applicable for state requirements. For details on your regulatory requirements you should contact the appropraite agency in your state.

Ingredient name	CAS number	State Code	Concentration (%)
Distillates, petroleum, hydrotreated light naphth enic	64742-53-6	MA - S, NJ - HS, PA - RTK HS	10 - 15%
Distillates (petroleum), hydrotreated light paraffinic	64742-55-8	MA - S, NJ - HS, PA - RTK HS	3 - 5%
Lubricating oils (petroleum), C15-30, hydrotreated neutral oil-based	72623-86-0	NJ - HS, PA - RTK HS	1 - 3%
Benzenesulfonic acid, di-C10-14-alkyl derivs., calcium salts	93820-57-6		32 - 38%
Calcium lanolate	68424-44-2		22 - 28%
(C16-C22) Alkylcarboxylic acid, calcium	68604-59-1		10 - 15%

Section 15. Regulatory information

salt
Fatty acids, coco, 2-ethylhexyl esters 92044-87-6 3 - 5%

Massachusetts Substances: MA - S
Massachusetts Extraordinary Hazardous Substances: MA - Extra HS
New Jersey Hazardous Substances: NJ - HS
Pennsylvania RTK Hazardous Substances: PA - RTK HS
Pennsylvania Special Hazardous Substances: PA - Special HS

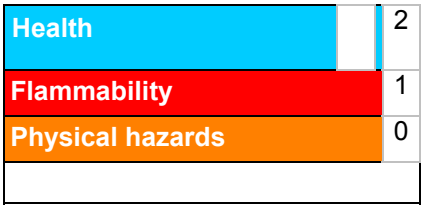
California Prop. 65

To the best of our knowledge, this product does not contain any of the listed chemicals, which the state of California has found to cause cancer, birth defects or other reproductive harm.

U.S. Toxic Substances Control Act : Listed on the TSCA Inventory.

Section 16. Other information

Hazardous Material Information System :



0=Insignificant 1=Slight 2=Moderate 3=High 4=Extreme
***=Chronic**

The customer is responsible for determining the PPE code for this material. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the National Paint & Coatings Association (NPCA). HMIS® materials may be purchased exclusively from J. J. Keller (800) 327-6868.

National Fire Protection Association (U.S.A.) :

0= Minimal 1=Slight 2=Moderate 3=Serious 4=Severe

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Product Safety and Regulatory Affairs

Indicates information that has changed from previously issued version.

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